

AMENDMENT UNDER 37 C.F.R. § 1.111
Application Serial No. 10/631,804
Attorney Docket No. Q76384

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. - 8. (Canceled)

9. (currently amended): An IC package comprising:

an IC chip;

a substrate including a conductive layer; and

a heat-radiating mechanism that is mounted on the substrate, disposed between the IC chip and the substrate, and dissipates heat of the IC chip,

wherein the heat-radiating mechanism comprises plural laterally adjacent heat sinks, and at least part of each heat sink is disposed directly below the IC chip, and

wherein terminals of the IC chip and the heat-radiating mechanism are electrically connected, and the heat-radiating mechanism and the conductive layer of the substrate are electrically connected,

wherein said conductive layer is a ground layer, and said substrate includes another conductive layer, said another conductive layer being a power layer, and

wherein a first of said plural heat sinks are electrically connected to the ground layer and a second of said plural heat sinks are electrically connected to the power layer.

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10. (original): The IC package of claim 9, wherein the plural heat sinks are disposed so as to be separate from each other.

11. - 17. (Canceled)

18. (previously presented): The IC package of claim 9, wherein the IC chip is fixed on the heat-radiating mechanism.

19. (previously presented): The IC package of claim 9, wherein the IC chip and the heat-radiating mechanism are electrically connected by wire bonding.

20. (previously presented): The IC package of claim 9, wherein the IC chip and the heat-radiating mechanism are electrically connected by a conductive material.

21. (previously presented): The IC package of claim 9, further including an insulating layer between the heat-radiating mechanism and the conductive layer of the substrate, wherein the heat-radiating mechanism and the conductive layer of the substrate are electrically connected via connection members disposed in plural through-holes disposed in the insulating layer.

22. (currently amended): The IC package of claim 9, wherein ~~said conductive layer is a ground layer, a first of said plural heat sinks being electrically connected to the ground layer, and~~

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at least a first of the terminals of the IC chip being a ground terminal electrically connected to said first of said plural heat sinks; and

~~wherein said substrate includes another conductive layer, said another conductive layer being a power layer, a second of said plural heat sinks being electrically connected to the power layer, and~~ at least a second of the terminals of the IC chip being a power terminal electrically connected to said second of said plural heat sinks..

23. (previously presented): The IC package of claim 10, further including an insulating layer between the heat-radiating mechanism and the conductive layers of the substrate, wherein said first of said plural heat sinks and the ground layer are electrically connected via a first set of connection members disposed in plural through holes disposed in insulating layer, and wherein said second of said plural heat sinks and the power layer are electrically connected via a second set of connection members disposed in plural through holes disposed in insulating layer.

24. (currently amended): An electrical device disposed with an IC package that includes:
an IC chip;
a substrate including a conductive layer; and
a heat-radiating mechanism that is mounted on the substrate, disposed between the IC chip and the substrate, and dissipates heat of the IC chip,

wherein the heat-radiating mechanism comprises plural laterally adjacent heat sinks, and
at least part of each heat sink is disposed directly below the IC chip, and

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wherein terminals of the IC chip and the heat-radiating mechanism are electrically connected, and the heat-radiating mechanism and the conductive layer of the substrate are electrically connected,

wherein said conductive layer is a ground layer, and said substrate includes another conductive layer, said another conductive layer being a power layer, and

wherein a first of said plural heat sinks are electrically connected to the ground layer and a second of said plural heat sinks are electrically connected to the power layer.